CLAIMS

1. Method for thermally galvanizing objects, in particular metal objects, comprising the steps of:

- pretreating an object for treating, including removing the surface layer from the object;
- arranging the pretreated object in a flux bath for fluxing of the object;
- arranging the fluxed object in a zinc bath in order to have the material of the object react with zinc and to apply a zinc-containing layer to the object,

wherein the step of pretreating comprises of blasting the object with grains so as to remove at least the surface layer.

2. Method as claimed in claim 1, wherein the average diameter of the grains amounts to between 0.25 and 1.6 mm.

3. Method as claimed in claim 1 or 2, wherein about 40% of the grains has an average grain size of 0.6-1.0 mm and 60% of the grains has an average grain size of 0.8-1.3 mm.

4. Method as claimed in claim 1, 2 or 3, wherein the grains are manufactured from steel with a low carbon content, preferably less than 0.18% by weight.

5. Method as claimed in claim 1, wherein between the step of shot-blasting and the step of fluxing the object is blown clean with air and/or is sprayed clean with liquid.

6. Method as claimed in claim 5, wherein the liquid is water to which chemical additives are preferably added to enhance draining of the liquid from the object.

7. Method as claimed in any of the foregoing claims, wherein after the step of galvanizing air is

guided along the object to blow off zinc droplets on the object.

8. Method as claimed in claim 7, comprising of feeding the blown-off zinc droplets back into the zinc bath.

9. Method as claimed in any of the claims 1-8, wherein the step of arranging the object in at least one of the baths comprises of having the object move through the bath in question.

10. Method as claimed in claim 9, comprising of transporting the object in substantially uninterrupted manner through the bath.

11. Method as claimed in claim 9 or 10, comprising of transporting the object through the bath at practically constant speed.

12. Method as claimed in claim 11, wherein the transporting speed through the zinc bath is in the order of magnitude of 50 to 250 cm, and preferably 80 cm, per minute.

13. Method as claimed in any of the foregoing claims, comprising of drying the fluxed object.

14. Method as claimed in any of the foregoing claims, comprising of cooling the object provided with a zinc layer.

15. Method as claimed in any of the foregoing claims, comprising of subjecting the object provided with a zinc layer to a burnishing treatment.

16. System for thermally galvanizing objects, in particular metal objects, comprising an overhead track provided with suspension elements from which one or more objects for treating can be suspended, in addition to drive means for displacing the suspension elements along the overhead track, wherein there are disposed along the overhead track at least:

- one or more shot-blasters for hurling one or more streams of grains in the direction of an object being displaced therealong for the purpose of removing at least the surface layer from the object;

- a flux bath for fluxing the object displacing through the bath;

- a galvanizing bath for thermally galvanizing the object displacing through the bath.

17. System as claimed in claim 16, wherein the shot-blasters are disposed to blast the object for treating at a number of predetermined blasting angles.

18. System as claimed in claim 17, wherein the shot-blasters are disposed in a casing, the dimensions of the entrance and exit opening of which are adjustable depending on the form and dimensions of the objects displacing through the casing.

19. System as claimed in claim 16, 17 or 18, wherein the overhead track is embodied with at least one descending part and at least one ascending part for respectively carrying the objects downward into a bath and upward out of the bath.

20. System as claimed in any of the claims 16-19, comprising detection means for detecting an object hanging from one of the suspension elements, in addition to control means for controlling the drive means of the overhead track and at least the shot-blasters in order to interrupt the driving of the suspension element and the shot-blasters with a predetermined time delay.

21. System as claimed in any of the claims 16-20, comprising means for drying the objects, means for cooling the objects and/or means for burnishing the objects.

22. System as claimed in any of the claims 16-21, wherein cleaning means are provided between the blasting means and the flux bath for blowing the object clean

with air and/or removing material residues from the object with liquid.

23. System as claimed in claim 22, comprising collecting means for collecting the mixture of material residues and air and/or liquid, means for separating the material residues, and means for feeding the air and/or the liquid back to the cleaning means.

24. System as claimed in any of the foregoing claims, wherein means are disposed at a position beyond the galvanizing bath for guiding air along the object so as to blow off zinc droplets on the object.

25. Suspension element for suspending an object in a system as claimed in any of the foregoing claims, wherein the suspension element is manufactured from an alloy such that substantially no zinc is absorbed or adheres to the surface of the element.

26. System as claimed in any of the claims 16-25 which is suitable for performing the method as claimed in any of the claims 1-15.

28. Device for shot-blasting one or more objects, in particular metal objects for galvanizing, comprising:

- a housing provided with an entrance opening and exit opening for supplying respectively discharging the objects for shot-blasting;
- displacing means for displacing the objects for shot-blasting in a path through the housing from the entrance opening to the exit opening;
- shot-blasters which are disposed on both sides along the path in the housing and are oriented differently in relation to the housing, and which hurl streams of grains at an object in a number of different blasting directions for the purpose of removing a surface layer from the object over substantially the whole surface thereof.

29. Device as claimed in claim 28, wherein the displacing means comprise:

- an overhead track extending along the route,
- one or more suspension elements which can be fixed to the overhead track and from which the objects for displacing can be suspended;
- drive means for displacing the suspension elements along the overhead track;
- a first guide element placed on a first side along the route;
- a second guide element placed on an opposite side along the route,

wherein the mutual distance between the first and second guide element is adjusted to the dimensions of the object.

30. Device as claimed in claim 29, wherein the guide elements are adapted for fastening of the guide elements at different intermediate distances, depending on the dimensions of the object.

31. Device as claimed in claim 29 or 30, wherein a suspension element engages on the top side of an object and the guide elements are disposed in order to limit the transverse displacement of the underside of the object.

32. Device as claimed in claim 29, 30 or 31, wherein said intermediate distance is adjustable to be a maximum of 30 cm, preferably a maximum of 10 cm, greater than the relevant dimension of the object.

33. Device as claimed in any of the claims 29-32, wherein the suspension element is manufactured from an alloy such that substantially no zinc is absorbed or adheres to the surface of the element.

34. Device as claimed in any of the foregoing claims 28-33, wherein the size of the entrance and exit openings is adjustable.

35. Device as claimed in claim 34, wherein the entrance opening and/or exit opening is defined by doors slidable relative to each other.

36. Device as claimed in claim 34 or 35, comprising first detection means positioned close to the entrance opening with which the dimensions of the following object for shot-blasting can be determined, in addition to control means which are coupled to the detection means and with which the size of the entrance opening and exit opening can be set subject to the detected object size.

37. Device as claimed in any of the foregoing claims, comprising a number of, preferably four, shot-blasters positioned on one side of the path and a number of, preferably four, shot-blasters positioned on the opposite side of the path.

38. Device as claimed in any of the foregoing claims, wherein the shot-blasters are embodied to hurl streams of grains with an average grain diameter between 0.25 and 1.6 mm.

39. Device as claimed in any of the foregoing claims, comprising second detection means for detecting an object hanging from one of the suspension elements, in addition to control means for controlling the drive means of the overhead track and at least the shot-blasters in order to interrupt the driving of the suspension element and the shot-blasters with a predetermined time delay.

40. Device as claimed in any of the foregoing claims, comprising control means which are coupled to the shot-blasters and the displacing means and which are adapted to adjust a suitable blasting capacity subject to the running speed produced by the displacing means.

41. Device as claimed in claim 40, wherein the shot-blasting capacity is defined by the quantity of

grains per unit of time, the blasting angles and/or the force with which the grains strike the object.